

REMARKS

The Office Action dated September 12, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 3, 5, 7, 8, 10, 19, and 20 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter is believed to have been added. Claims 1-20 are currently pending and are respectfully submitted for consideration.

Reconsideration and withdrawal of the rejections is respectfully requested in light of the following remarks.

Claim 20 was rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. However, this rejection is respectfully traversed as follows.

Applicant respectfully submits that claim 20 contains subject matter that is implicitly described in the specification in such a way so as to reasonably convey to a person of ordinary skill in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Particularly, as illustrated in Figure 2 of the application, a DNS server includes a name resolving function and an address and protocol translation function (see Specification, Page 7, Line 23 to Page 8, Line 10). As such, it would be readily appreciated by a person of ordinary skill in the art that the DNS server illustrated in Figure 2, for example, includes some type of "computer readable

medium” that embodies a computer program to carry out the method of “processing a name resolve request ... and performing address translation”, as recited in claim 20. Applicants respectfully submit that a person that fails to appreciate such would not be considered a person of ordinary skill in the art or one of ordinary skill in the art, as referred to by the Office Action.

Furthermore, Section 112 of the Patent Act states that the “specification shall contain a written description of the invention.” 35 U.S.C. §112. The Federal Circuit has held that “[t]o fulfill the written description requirement, the patent specification must describe an invention in sufficient detail that one skilled in the art can clearly conclude that the inventor invented what is claimed.” *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1364, 67 USPQ2d 1876, 1885 (Fed. Cir. 2003). The Federal Circuit has explained, however, that “[t]he disclosure as originally filed does not ... have to provide in haec verba support for the claimed subject matter at issue.” *Id.* See additionally, *Kao Corp. v. Unilever United States, Inc.*, 78 USPQ2d 1257, 1260 (Fed. Cir. March 21, 2006). In other words, there is no requirement that the precise language used in the claims appear in the specification, in order to satisfy the written description requirement. As such, the concept claimed, i.e. a computer program, embodied on a computer readable medium is fully supported in the specification, in such a way that one of ordinary skill in the art could clearly conclude that the inventor invented what is claimed. Therefore, the claims fully comply with the written description requirement of 35 U.S.C. § 112.

Accordingly, Applicant respectfully requests that rejection of claim 20 under the first paragraph of 35 U.S.C. § 112 be withdrawn.

Claim 20 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Particularly, the Office Action asserted that computer readable medium could include both tangible mediums (e.g. storage medium) and non-tangible mediums (e.g. carrier waves and transmission media). However, this assertion by the Office Action is respectfully traversed as follows.

According to MPEP § 2106.01, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. In this case, as required by the MPEP, claim 20 explicitly recites “a computer program, *embodied on a computer readable medium*” (emphasis added) to define the structural and function interrelationship between the computer program and the hardware components which permits the data structure's functionality to be realized, as required by the MPEP. Furthermore, there is no such requirement in MPEP § 2106.01 that the claim must expressly recite a computer readable storage medium, as asserted by the Office Action. Accordingly, Applicant respectfully requests that the rejection of claim 20 under 35 U.S.C. § 101 be withdrawn.

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hovell, *et al.* (International Application No. WO 02/073933) (“Hovell”) in view of

Ananda, *et al.* (U.S. Patent Publication No. 2004/0107287) (“Ananda”). Particularly, the Office Action asserted that the combination of Hovell, *et al.* and Ananda, *et al.* disclosed all of the elements of claims 1-20. However, this assertion by the Office Action is respectfully traversed as followed.

Claim 1, upon which claims 2-7 are dependent, recites an apparatus. The apparatus includes a resolver configured to perform name resolving. The apparatus includes a first connector configured to provide a first direct connection to a first network, using a first network protocol. The apparatus includes a second connector configured to provide a second direct connection to a second network using a second network protocol. When the resolver in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly from the resolver in the first network to the second network. The apparatus includes a translator configured to perform address translation between the first network and the second network. The resolver and the translator are configured to co-operate in order to translate addresses upon performing name resolving.

Claim 8, upon which claim 9 is dependent, recites a system. The system includes a network name resolving element and at least two network address translating elements. The network name resolving element configured to perform name resolving in a network system which includes a first network using a first network protocol and a second network using a second network protocol. The network element includes a resolver configured to perform name resolving. The network element includes a first connector

configured to provide a first direct connection to the first network. The network element includes a second connector configured to provide a second direct connection to the second network. When the resolver in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly from the resolver in the first network to the second network. The network element includes a translator configured to perform address translation between the first network and the second network. The resolver and the translator are configured to co-operate in order to translate addresses upon performing name resolving. The translator is configured to select a particular network address translating element to be used for a connection between a first host in the first network and a second host in the second network. The translator is configured to add network address translating element information to the resolved address. The translator is configured to select a network address translating element based on information regarding the load on the network address translating element. The network address translating elements are configured to send load information to the network element.

Claim 10, upon which claims 11-18 are dependent upon, recites a method. The method includes processing a name resolve request to obtain an address. The method also includes performing address translation between a first network using a first network protocol and a second network using a second network protocol. The name resolve request processing and the address translation are performed in a dedicated network name resolving element configured to perform name resolving located in the first network and

having a first direct connection to the first network and a second direct connection to the second network. When a resolver in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly from the resolver in the first network to the second network.

Claim 19 recites an apparatus. The apparatus includes a resolving means for performing name resolving. The apparatus includes a communicating means for providing a first direct connection to a first network using a first network protocol. The apparatus also includes a communicating means for providing a second direct connection to a second network using a second network protocol. When the resolving means for performing name resolving in the first network forwards a name resolving request to a server in the second network, the name resolving request is sent directly from the resolving means for performing name resolving in the first network to the second network. The apparatus includes a translating means for performing address translation between the first network and the second network. The resolving means for performing name resolving and the translating means for performing address translation are configured to co-operate in order to translate addresses upon performing name resolving.

Claim 20 recites a computer program, embodied on a computer readable medium, configured to control a processor to implement a method. The method includes processing a name resolve request to obtain an address. The method also includes performing address translation between a first network using a first network protocol and a second network using a second network protocol. The processor is located in a

dedicated network name resolving element configured to perform name resolving located in the first network and having a first direct connection to the first network and a second direction connection to the second network. When a resolver in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly from the resolver in the first network to the second network.

As will be discussed below, Applicants respectfully submit that Hovell and Ananda, whether considered alone or in combination, fail to disclose, either expressly or implicitly, all of the elements of the claims, and therefore fails to provide the advantages and features as discussed above.

Hovell generally discusses providing communication between a network device in a first network and a network device in a second network (see Hovell, Page 2, Lines 7-11). Moreover, Hovell describes a first means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (see Hovell, Page 2, Lines 12-14). Hovell also describes a second means for translating the assigned alias to an address for the target network device, the translated address being compatible with the communication protocol of the first network (see Hovell, Page 2, Lines 15-17).

The Office Action correctly acknowledged that Hovell failed to teach wherein the name resolving unit in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly

from the name resolving unit in the first network to the second network and relied upon Ananda to teach this feature. However, this assertion made by the Office Action is incorrect.

Rather, Ananda generally discusses communicating on a communication network using a variety of communication protocols (see Ananda, Paragraph [0001]). According to Ananda, a communication protocol interface (CPI) includes an IPv4 processor that processes IPv4 specific communication, an IPv6 processor that processes IPv6 specific communication, and a protocol converter that processes communication between the IPv4 and IPv6 (see Ananda, Paragraph [0063]).

However, nothing in Ananda remotely suggests “when the resolver in the first network forwards a name resolving request to a domain name service server in the second network, the name resolving request is sent directly from the resolver in the first network to the second network”, as recited in claim 1, and similarly recited in claims 8, 10, 19, and 20. More particularly, Ananda cannot suggest sending “the name resolving request ... *directly from the solver in the first network to* [the domain name service server in] the *second network*” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20 (see Application, Figure 5). The absence of the above-quoted feature in Ananda is not surprising as Ananda describes the use of a protocol converter to process communication between the IPv4 and IPv6 processors.

Furthermore, contrary to the assertion made by the Office Action, Paragraph [0071] of Ananda, which refers to Figure 1 of Ananda, cannot disclose, either expressly

or implicitly, the above-quoted features. Rather, Paragraph [0071] of Ananda, with reference to Figure 1 of Ananda, states:

The communication network 100 is typically employed in an organization, for example in a corporation or university. To transition from IPv4 to IPv6, the prior art approach has been for the organization to initiate change from the host level first to make all end components operable on IPv6, and then change the communication backbone to support IPv6. Consequently, existing hosts 115B, 115C, 120B, 120C, as well as the DHCP server 115, the DHCP relay 120A and the DNS server 125, will necessarily have to be changed from IPv4 to dual-stack hosts that operate on both IPv4 and IPv6, to enable existing IPv4 or IPv6 applications on the hosts and servers, to run without modification. Unfortunately, existing hosts and servers that only operate on IPv4 will not function, since IPv4 and IPv6 are not operable.

However, paragraph [0071] of Ananda is silent as to “the name resolving request [being] sent *directly from the solver in the first network to* [the domain name service server in] *the second network*” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20. This silence is not surprising as Paragraph [0071] of Ananda is merely concerned with changing the existing hosts to dual-stack hosts to operate on both IPv4 and IPv6.

Moreover, Paragraph [0079] of Ananda, which is relied upon by the Office Action, states:

[t]he multi-protocol subnet 220 is couple to the router 210C, is similar to the multi-protocol 215, and comprises a number of networked computers, which function as a dual-stack DHCP relay 220A, an IPv4 host 220B, a dual-stack host 220C, and an IPv6 host 220. In addition, the multi-protocol subnet 220 includes another CPI 220E that enables multi-protocol communication within the multi-protocol subnet 220; and also enables communication between subnets coupled to the IPv6 communication backbone 210.

Stated another way, Paragraph [0079] of Ananda describes that the multi-protocol subnets 215 and 220 function as a dual-stack DHCP relay 220A, an IPv5 host 220B, a dual-stack host 220C, and an IPv6 host 220. However, nothing in Paragraph [0079] of Ananda remotely suggests how “the name resolving request is sent *directly from the solver in the first network to [the domain name service server in] the second network*” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20. As such, a mere discussion of how multi-protocol subnets 215 and 220 function does not disclose, either expressly or implicitly, the feature quoted above.

Furthermore, Paragraph [0080] of Ananda, which is also relied upon by the Office Action, generally discusses:

... the DNS server 225A provides domain name server service to the hosts on the communication network 200 ... via the IPv6 communication network 210. The IPv6 router 225B only routes data packets and is coupled to the IPv4 portion 105 of the Internet 107 to provide the IPv4 hosts 215B and 220B and dual-stack hosts 215C and 22C ... with access to IPv4 hosts 108 on the IPv4 portion 105 of the Internet 107, or the public IPv4 DNS server 109.

As such, contrary to the assertion made by the Office Action, Paragraph [0080] of Ananda fails to disclose, either expressly or implicitly” that how “the name resolving request is sent *directly from the solver in the first network to [the domain name service server in] the second network*” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20.

The Office Action also relied upon Paragraphs [0083]-[0085] of Ananda to disclose the above-quoted feature. However, the Office Action’s reliance upon

Paragraphs [0083]-[0085] of Ananda is incorrect, because Paragraph [0083]-[0085] of Ananda is merely concerned with assigning global IPv4 address or private IPv4 addresses to IPv4 hosts and dual-stack hosts. Furthermore, paragraphs [0083]-[0085] of Ananda generally discuss the relation between the IPv4 address assignments to the IPv6 address assignments. As such, these sections of Ananda, relied upon by the Office Action, fail remotely suggest any type of transmission of a name resolving request.

Moreover, Paragraph [0130] of Ananda, which is also relied upon by the Office Action, generally discusses that a routing table 324 is used to determine whether the destination address of the returning IPv4 data packet is within the communication network 200. Paragraph [0130] of Ananda also discusses that the encapsulator 352 encapsulates the returning IPv4 data packet to produce a returning resultant IPv6 data packet. However, Paragraph [0130] is silent as to “the name resolving request [being] sent *directly from the solver in the first network to* [the domain name service server in] *the second network*” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20. This silence in Paragraph [0130] of Ananda is not surprising, since Paragraph [0130] of Ananda is merely concerned with processing an IPv4 data packet to produce an IPv6 data packet.

Therefore, without belaboring the comments discussed above, none of the section of Ananda, which were relied upon by the Office Action, whether considered alone or in combination, disclose, either expressly or implicitly, how “the name resolving request is sent *directly from the solver in the first network to* [the domain name service server in]

the second network” as recited in claim 1, and as similarly recited in claims 8, 10, 19, and 20. As a result, Applicants respectfully submit that Ananda fails to cure the above-mentioned deficiencies of Hovell as discussed above with respect to claims 1, 8, 10, 19, and 20. Thus, Applicants respectfully submit that the subject matter disclosed in independent claims 1, 8, 10, 19, and 20 should be allowed for at least the reasons stated above.

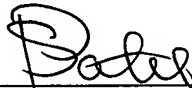
The dependent claims should be allowed for at least their dependence upon their respective base claims, and for the specific limitations recited therein. Accordingly, withdrawal of the rejection is respectfully requested.

For at least the reasons discussed above, Applicants respectfully submit that none of the cited references, whether considered alone or in combination, disclose, either expressly, implicitly or inherently, all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-20 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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